

REMARKS/ARGUMENTS

Claims 1-20 are pending herein. Claims 1-20 have been amended hereby to correct matters of form and for clarification purposes. Applicant respectfully submits that no new matter has been added.

1. Applicant appreciates the PTO indicating that claim 4 would be allowed if rewritten in independent form. Applicant respectfully submits, however, that claim 4 depends from independent claim 2, which is in condition for allowance for the reasons explained below. In addition to claims 2 and 4, Applicant respectfully submits that all claims pending herein are in condition for allowance, and respectfully requests that the PTO issue a Notice of Allowance for this application in due course.

2. Claims 1, 10, 13-17, 19 and 20 were rejected under §102(b) over Kano. Applicant respectfully traverses this rejection.

Independent claim 1 recites a heater comprising a plate including a heating surface and a resistance heater element provided in the plate. The resistance heater element comprises a continuous wiring pattern including a plurality of flexures and including a uniform thermal patterned portion wherein an area between radially adjacent flexures is controlled to improve thermal uniformity between the adjacent flexures.

Independent claim 10 recites a heater comprising a plate including a heating surface having at least one hole formed therein and a resistance heater element provided in the plate. The resistance heater element comprises a continuous wiring pattern including a plurality of flexures and a plurality of curved portions which avoid the at least one hole. Each of the curved portions have a radius of curvature that sequentially increases as the respective distance between the respective curved portions and the at least one hole increases.

Independent claim 15 recites a heater comprising a plate including a heating surface and a resistance heater element provided in the plate. The resistance heater element comprises a wiring pattern including a plurality of concentrically disposed

element lines having terminals for input/output of electric power, each of the element lines including a wiring pattern. At least one of the element lines passes between the terminals by means of a flexure that includes a swollen portion that curves in an asymptotic direction with respect to at least one of an adjacent portion of that line element and an adjacent portion of another adjacent line element.

As explained in the present specification, the heaters according to the present invention provide improved thermal uniformity by controlling (reducing) the area between radially adjacent flexures (folding parts) in the wiring pattern.

Applicant respectfully submits, however, that Kano does not disclose each and every element recited in independent claims 1, 10 and 15. That is, Applicant respectfully submits that Kano does not disclose a continuous wiring pattern having a plurality of flexures arranged to provide a uniform thermal pattern portion such that the area between radially adjacent flexures is controlled to improve thermal uniformity, as recited in independent claim 1. Nor does Kano disclose a continuous wiring pattern including a plurality of flexures and a plurality of curved portions which avoid at least one hole formed in the heater plate, and wherein the radius of curvature of each curved portion sequentially increases as the respective distance between the curved portions and the hole increases, as recited in independent claim 10.

Moreover, Applicant respectfully submits that Kano does not disclose a heater comprising a wiring pattern including a plurality of concentrically disposed element lines, at least one of which passes between the terminals by means of a flexure which includes a swollen portion that curves in an asymptotic direction with respect to at least one of an adjacent portion of that line element and an adjacent portion of another adjacent line element, as recited in independent claim 15.

For at least the foregoing reasons, Applicant respectfully submits that independent claims 1, 10 and 15, and all claims respectively depending therefrom, define patentable subject matter over Kano. Accordingly, Applicant respectfully requests that the above rejection be reconsidered and withdrawn.

3. Claims 1, 2, 5 and 8 were rejected under §102(b) over Hurko. Applicant respectfully traverses this rejection.

Independent claim 1 is discussed above in section 2.

Independent claim 2 recites a heater comprising a plate including a heating surface and a resistance heater element provided in the plate. The resistance heater element comprises a continuous wiring pattern including a plurality of radially sequential wirings having a plurality of radially adjacent folding parts. A first distance between radially adjacent wirings in a first region of the wiring pattern, other than a second region of the wiring pattern proximate the folding parts, is substantially constant. A second distance between radially adjacent wirings in the second region is greater than the first distance.

Applicant respectfully submits, however, that Hurko does not disclose each and every element recited in independent claims 1 and 2. That is, Applicant respectfully submits that independent claim 1 defines patentable subject matter over Hurko for the same reasons explained above in section 2 with respect to Kano. Further, Applicant respectfully submits that Hurko does not disclose a continuous wiring pattern including a plurality of radially sequential wirings having a plurality of radially adjacent folding parts, wherein the first distance between radially adjacent wirings in the first region of the wiring pattern, other than a second region of the wiring pattern proximate the folding parts, is substantially constant, and wherein a second distance between radially adjacent wirings in the second region is greater than the first distance, as recited in independent claim 2.

For at least the foregoing reasons, Applicant respectfully submits that independent claims 1 and 2, and all claims depending therefrom, define patentable subject matter over Hurko. Accordingly, Applicant respectfully requests that the above rejection be reconsidered and withdrawn.

4. Claims 1, 2, 3, 5 and 8 were rejected under §102(b) over Mizuno. Applicant respectfully traverses this rejection.

Independent claims 1 and 2 are discussed above in sections 2 and 3, respectively. Applicant respectfully submits, however, that Mizuno does not disclose each and every element recited in independent claims 1 and 2.

That is, Applicant respectfully submits that independent claim 1 defines patentable subject matter over Mizuno for the same reasons explained in sections 2 and 3 above with respect to Kano and Hurko, and that independent claim 2 defines patentable subject matter over Mizuno for the same reasons explained in section 3 above with respect to Hurko.

For at least the foregoing reasons, Applicant respectfully submits that independent claims 1 and 2, and all claims depending therefrom, define patentable subject matter over Mizuno. Accordingly, Applicant respectfully requests that the above rejection be reconsidered and withdrawn.

5. Claims 6-9 were rejected under §103(a) over Hurko in view of Yoshida. Applicant respectfully traverses this rejection.

Claims 6-9 each depend, either directly or indirectly, from independent claim 2, which is discussed above in section 3. Applicant respectfully submits, however, that since independent claim 2 defines patentable subject matter over Hurko for the reasons explained in section 3 above, claims 6-9 likewise define patentable subject matter over the applied references by virtue of their dependency from independent claim 2.

For at least the foregoing reasons, Applicant respectfully submits that all claims pending herein define patentable subject matter over the applied references, and respectfully requests that the above rejection be reconsidered and withdrawn.

6. Claim 11 was rejected under §103(a) over Kano in view of Mizuno, and claims 12 and 18 were rejected under §103(a) over Kano in view of Fure or Yoshida. Applicant respectfully traverses these rejections.

Claims 11 and 12 each depend from independent claim 10, and claim 18 depends from independent claim 15. Independent claims 10 and 15 are discussed in section 2 above. Since independent claims 10 and 15 define patentable subject matter over Kano for the reasons explained above, Applicant respectfully submits that claims 11, 12 and 18 likewise define patentable subject matter over Kano by virtue of their respective dependencies from independent claims 10 and 15.

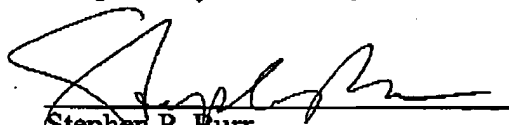
For at least the foregoing reasons, Applicant respectfully submits that all claims pending herein define patentable subject matter over the applied references. Accordingly, Applicant respectfully requests that the above rejections be reconsidered and withdrawn.

If the Examiner believes that contact with Applicant's attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicant's attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

December 16, 2004
Date


Stephen P. Burr
Reg. No. 32,970

SPB/NB/gmh

BURR & BROWN
P.O. Box 7068
Syracuse, NY 13261-7068

Customer No.: 025191
Telephone: (315) 233-8300
Facsimile: (315) 233-8320